

C. REMARKS/ARGUMENTS

This amendment is responsive to the Office Action mailed on January 30, 2007, and seeks to place all pending claims in condition for allowance.

1. Claim Objections

In the Office Action, the Examiner indicated that claims 2-7 are allowable, with minor corrections required to claim 2 and claim 7 to maintain proper antecedent basis and remove double inclusion issues. Additionally, claim 8 required correction for proper antecedent basis. Applicant has amended those claims to address the Examiner's objections. As a result of the amendments made herein, Applicant submits that claims 2-7 are in condition for allowance. Additionally, as further described herein, Applicant submits that all of the claims are in condition for allowance.

2. Claim Rejections – 35 USC § 112

In the Office Action, the Examiner rejected claims 8-19 under 35 USC § 112, first paragraph, because "the recitation of 'fuel injection assembly' is broader in scope than what is disclosed in the specification, which is at most a 'supersonic injector' or 'supersonic nozzle'." Accordingly, Applicant has amended each of independent claim 8 and independent claim 12 to replace "fuel injection assembly" with "supersonic injector assembly." It is believed that amendment resolves the basis for the Examiner's rejection under 35 USC § 112, first paragraph, and thus places claims 8-19 in condition for allowance.

3. Claim Rejections – 35 USC § 103

The Examiner has rejected claims 8-11 under 35 USC § 103(a) as being unpatentable over Bulman (U.S. Patent No. 5,220,787). As understood by Applicant, Bulman teaches scramjet fuel injectors of the type mounted to the wall of a combustor in a gas turbine engine assembly designed to produce thrust, such as gas turbine engines used in jet aircraft.

With respect to independent claim 8, Applicant has amended the claim to indicate that the combustion chamber is above a piston of a gaseous fueled engine. That amendment is

supported at paragraph [0014] and the accompanying Figure 1, for example. There is no teaching or discussion in Bulman of piston driven engines, let alone the use of supersonic injectors in piston driven engines. The lack of teaching or motivation in Bulman is understandable since Bulman is directed to high-pressure (1500 PSI) gaseous fuel injector assemblies for jet turbine engines, whereas Applicant's claimed invention is directed to piston-driven engines having gaseous fuel delivered at less than 200 PSI. Compare, for example, Applicant's Para. [0002] versus Bulman at Col. 9, lines 45-59. Fuel injector technology is heavily dependent upon the engine application, as can be appreciated by the cited reference and by Applicant's teachings. Clearly, the mere suggestion of "valving" in the context of Bulman's high-pressure gas turbine fuel injector assemblies does not render Applicant's claims obvious.

Applicant submits that claim 8 as amended is novel and non-obvious over the cited art, and thus render the Examiner's rejection moot. Applicant further submits that claims 8-11 are now condition for allowance.

4. Other Pending Claims, New Claims

Applicant notes that claims 2-7 and 12-19 were subject only to objections, and not to rejection. The Examiner's objections have been addressed by the amendments to independent claims 2, 8, and 12 as presented herein. Additionally, claim 13 has been amended to more particularly point out Applicant's invention. Therefore, it is believed that pending claims 2-7 and 12-19 are now in condition for allowance.

By this amendment, Applicant has added new claims 20-21. Those claims are directed to the supersonic injector (alone) of the claimed injector and engine combination set forth in claim 12. Because new claims 20-21 are fully supported in the patent application and previously presented claims, Applicant submits that no new matter is being added by this Amendment. Support for new claims 20-21 may be found in the application as filed, for example, in paragraph [0014].

In closing, Applicant believes that claims 2-21 are now in condition for allowance. Reconsideration and prompt allowance of all pending claims are respectfully requested.

This Amendment/Response has been filed within three (3) months of the mailing date of the Office Action and it is believed that no fees other than excess claim fees are due with the

filing of this paper. In the event that Applicants are mistaken in their calculations, the Commissioner is hereby authorized to deduct any fees determined by the Patent Office to be due from the undersigned's Deposit Account No. 50-1059.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 717-237-5458.

Respectfully Submitted,
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